

*empFiear*

MODEL 770



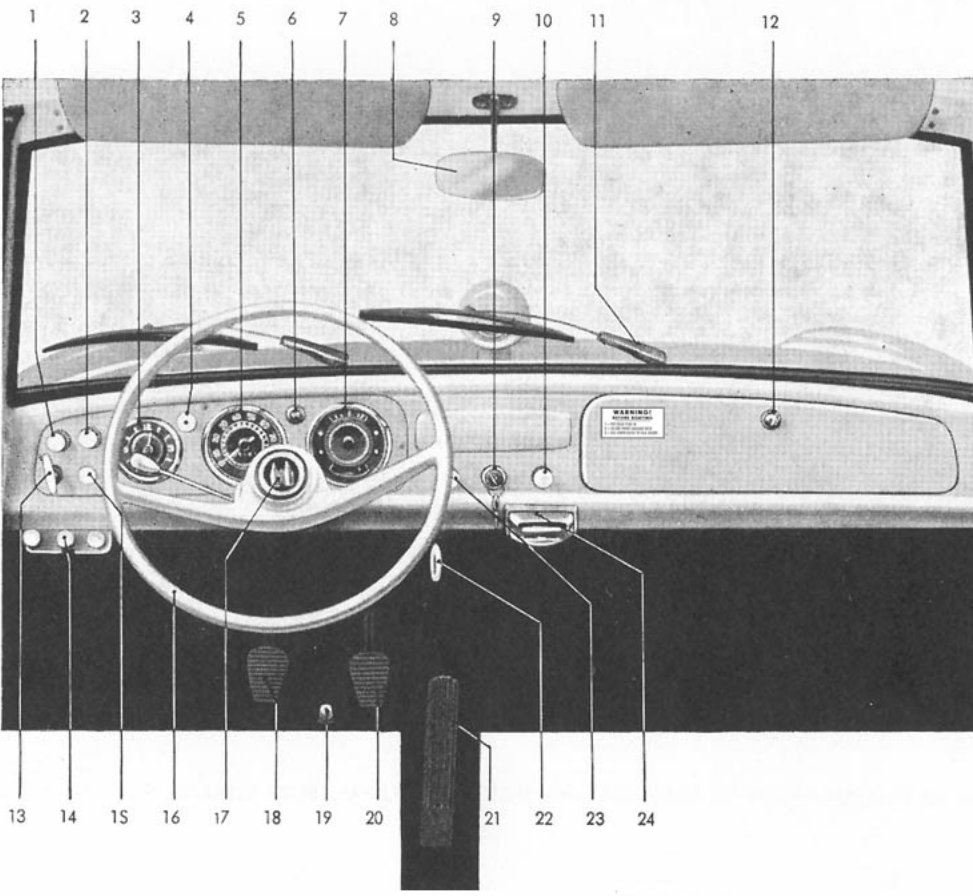
OWNERS MANUAL

Congratulations  
and welcome  
to our family of Amphicar owners

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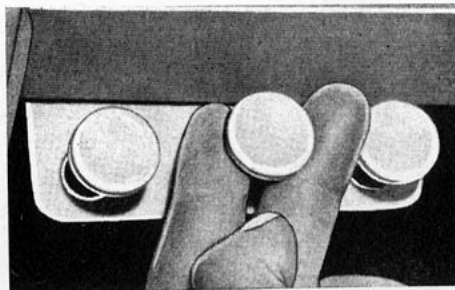
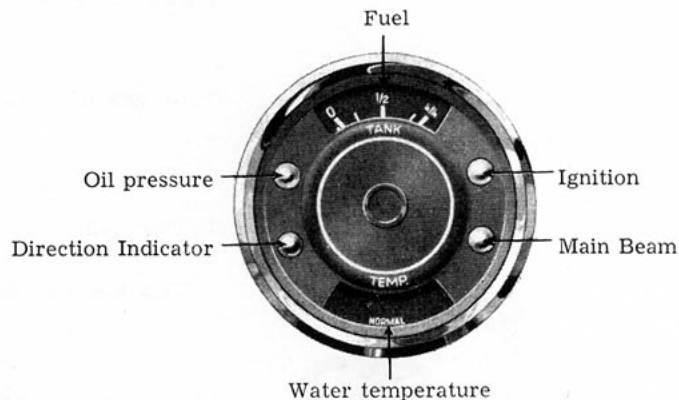
*Please read this manual carefully so that you may  
enjoy more fully the wonders of this amphibious vehicle*

## Dashboard and footpedals for land and water use

- 
1. Starboard and top lights **For water only**
  2. Windshield wiper control
  3. Electric clock
  4. Bilge pump control **For water only**
  5. Speedometer
  6. Water transmission control light  
**For water only**
  7. Instrument cluster
  8. Rear view mirror
  9. Ignition switch
  10. Cigarette lighter
  11. Windshield wiper
  12. Glove compartment
  13. Hand throttle **For water only**
  14. Heater - three control knobs
  15. Choke
  16. Steering wheel
  17. Horn button
  18. Clutch pedal
  19. Foot dimmer switch
  20. Brake pedal
  21. Accelerator pedal
  22. Handbrake
  23. Light switch
  24. Ashtray

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## Keys – to a new experience in driving

Two sets of keys are furnished with your car.



1. The round key operates the ignition and door locks.

**This key has the number** \_\_\_\_\_



2. The small key operates the glove compartment.

**This key has the number** \_\_\_\_\_



3. The large key operates the engine hood and luggage compartment locks.

Make a record of the key numbers.

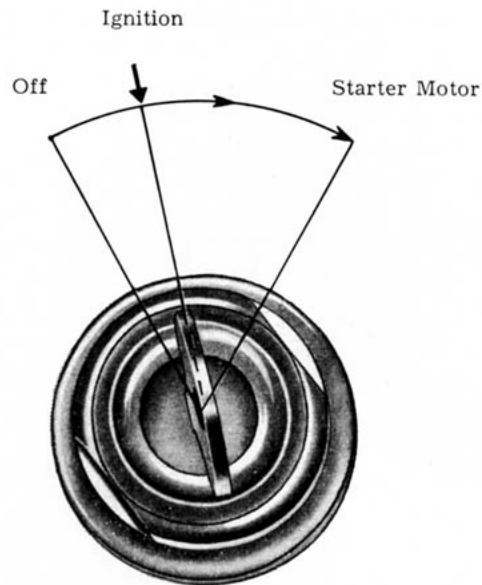
If you loose your keys, they can be secured by writing to your „Amphicar“ dealer.

## Operating instructions

A. **On Land** - The ignition switch has three positions - off, on, and start.

### Starting your car

1. Place the gear shift control lever in neutral and depress the clutch pedal (18) to the floor.
2. Engine Cold - Pull out choke knob.
3. Turn ignition key to the right to start (on) position. The ignition and oil pressure warning lights should now glow and the fuel gauge should register the amount of fuel in the tank.
4. Turn the key further clockwise against the spring pressure to engage the starter and release as soon as the engine starts allowing the key to return to the (on) position. If the engine failed to start, wait until the motors has ceased to rotate before engaging the starter again.



It is advisable to warm up the engine before shifting gears.

# REVISED STARTING INSTRUCTIONS

Safety precautions are more critical in boats than automobiles, especially where, in an inboard boat, inflammable or combustibile air-gas combinations cannot escape as freely as in an automobile.

In line with our constant desire to improve our product we have fitted for some time, an Electric Automatic Bilge Blower System, the functioning of which is detailed below.

## Normal Starting Procedure

- Insert ignition key into the ignition switch and turn key clockwise into "on" position (vertical). This starts the bilge blower which draws the fumes out of the bilge into the atmosphere. Turning the ignition key further clockwise into starting position will have no effect, until
- Leave ignition key in "on" position for approximately 2 minutes. After this period a relay tube automatically activates the ignition circuit and turns the bilge blower off. When the bilge blower is shut off and the ignition system is working the blue generator charge and amber oil pressure control lights turn on, indicating that the driver is able to start the engine.
- Turn the ignition key farther clockwise and start the engine.

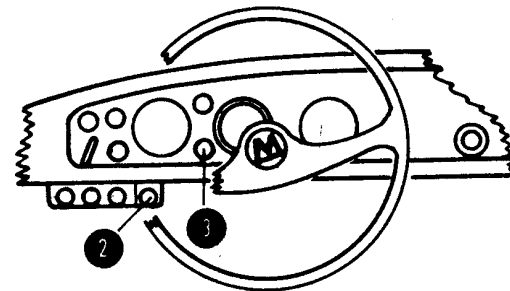
## Emergency Starting Procedure

If, under any circumstances, immediate starting will be necessary, the following procedure has to be observed.

- Insert ignition key into ignition switch and turn into "on" position.
- Press "Emergency Starter" bottom #2 as shown on attached drawing. This switch connects the ignition system and the before mentioned control lights in the combination instrument will light up, indicating that the engine can be started immediately by turning the ignition key farther clockwise.

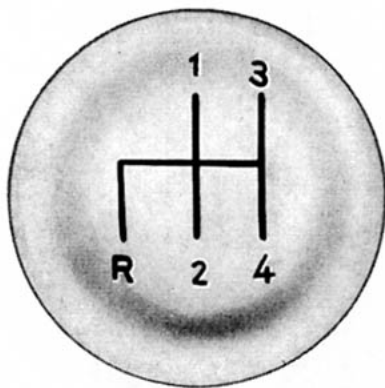
## Emergency Ventilating Procedure

If under any circumstances gas fumes should be noticed, even though the bilge blower has ventilated the bilge the full 2 minute period, the bilge blower can be operated manually for any length of time by pulling the switch #3 as shown on attached drawing.



## Driving with Synchro-Mesh Transmission

The Amphicar is equipped with four forward speeds and one reverse speed. The shift pattern for this transmission is the familiar design as illustrated:



**FIRST GEAR (LOW)**-Depress the clutch pedal, shift into first gear, and slowly release clutch pedal while simultaneously pressing on the accelerator pedal. **NOTE:** First gear should always be used to start the car moving and should never be engaged when the car is in motion.

**SECOND GEAR**-Depress the clutch pedal, shift into second gear and slowly release the clutch pedal while simultaneously pressing on the accelerator pedal. **NOTE:** Avoid starting the car in second gear, as this practice may cause overheating of the clutch plate. For additional power at slow speeds, the transmission can be shifted from third to second by depressing the clutch pedal and shifting the gear lever from third to second position.

**THIRD-GEAR**-Depress the clutch pedal, shift into third gear and release the clutch pedal while simultaneously pressing on accelerator pedal. **NOTE:** Never use third gear from a stop position. Use for quick acceleration when passing at lower speeds and when pulling out of sharp turns.



**FOURTH GEAR**-Depress the clutch pedal, shift into fourth gear and release the clutch pedal while simultaneously pressing on the accelerator pedal. **NOTE:** This gear is the cruising gear for all normal driving, fifty to seventy miles an hour.

**REVERSE**-Operate reverse only from a complete stop position and only in slow speeds.

#### TO STOP

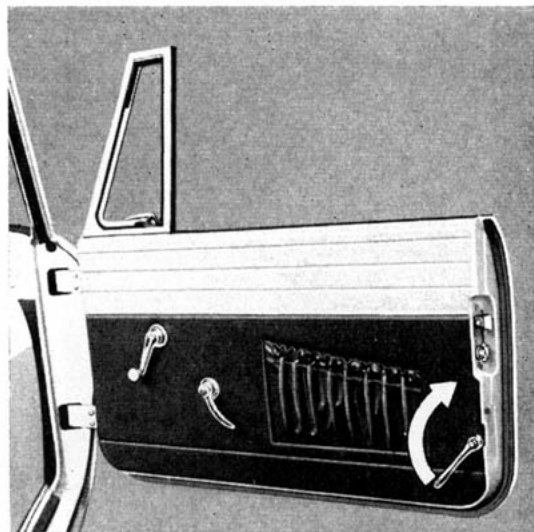
Release the accelerator pedal and depress the brake pedal. As the car slows down, depress the clutch pedal along with the brake pedal and move the gearshift lever into neutral position.

Apply the hand brake when the vehicle comes to a complete stop.

**NEUTRAL**-For use when starting or idling the car. Never coast in neutral.

#### In Water

Before entering the water, First: Lock both doors from the inside using the additional door locks.



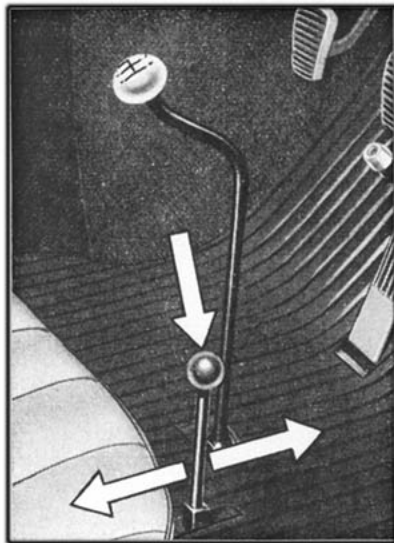
Additional door locks

Second: As you approach the water, slow down and shift into first gear. Enter the water in first gear and when the car is floating, depress the clutch pedal, place the gear shift lever in neutral and

**CONTINUE TO HOLD THE CLUTCH PEDAL DOWN!**

Third: With the clutch pedal down, shift the water gear lever forward and slowly release the clutch pedal while simultaneously pressing on the accelerator pedal as the vehicle moves forward.

Reverse: Depress the clutch pedal and slowly shift the water gear shift (short lever with red knob) lever to the reverse position.



**NOTES:**

1. In the water your vehicle operates as a motor boat.
2. There are **no brakes** in the water you may slow down by releasing the accelerator.
3. The hand throttle on the dashboard may be used instead of the accelerator pedal for more relaxed boating.
4. The water transmission control light on the dashboard lights up to show that the water transmission is working.
5. **STEERING** - Your steering wheel is the same for water as on land. Steering reaction is faster at higher speeds. Steering to the right is sharper than steering to the left because both screws turn clockwise.

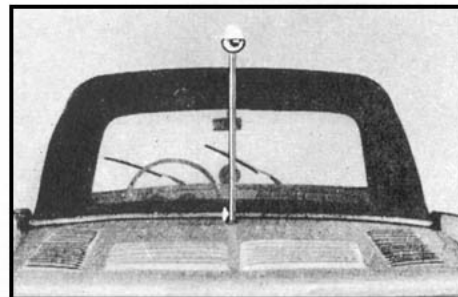
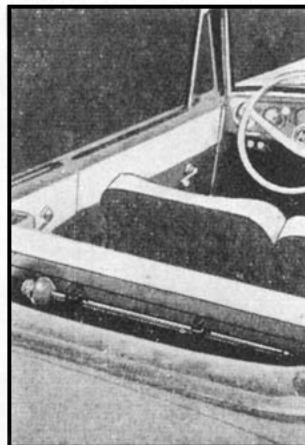
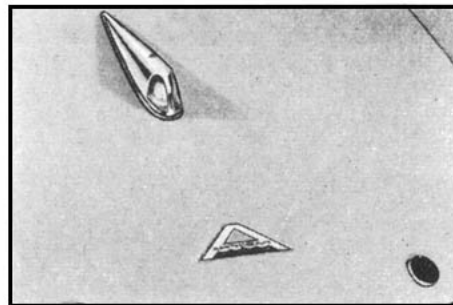
(Water traffic rules generally require that vessels approaching each other steer to the right to avoid collision.)

6. **BILGE PUMP CONTROL** - This control is located on the dashboard and should be pulled out to operate the pump, should any water accumulate in the bilge compartment. As soon as the water is pumped out push the button in to avoid wear caused by dry operation.

7. **AT NIGHT** - Use the top light accessory which is located in the top deck compartment and insert in the socket connection in the engine hood for rear light.

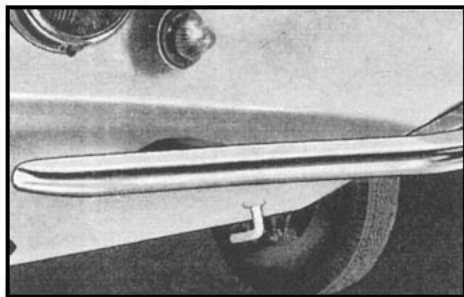
The starboard light is a permanent accessory located on the front hood.

Both lights are controlled by a single knob located on the dashboard.



## Driving hints

1. Always make sure that the gear lever is in neutral before attempting to start the engine.
2. Do not continue to operate the starter switch if the engine does not fire. This will quickly discharge the battery. Remember to switch off the ignition when the vehicle is stationary. If left on for long periods, this will also discharge the battery.
3. Push in the choke control as early as possible.
4. Do not continue to run the engine if the oil pressure warning light remains on at a speed above "idle", but stop the engine and check oil-level.
5. When descending a hill it is dangerous to coast the vehicle by depressing the clutch while the gear is engaged.
6. When climbing hills, make sure you reach sufficient high speeds before shifting to higher gears.
7. Except in an emergency, never apply the brakes suddenly. Brake early and lightly, also avoid rapid cornering.
8. After driving in water, be sure to test brakes before accelerating the vehicle over 20 m.p.h. Several light applications of the foot brake will dry and bring the brakes back to normal.
9. Do not use a match or other flame when checking the level of the water in the battery, otherwise a minor explosion may occur in the cells.
10. Do not use a rope attached to the bumper bar, should it be necessary to tow the car. Use the hook which is located under the bow of your car.



## To drive from water on land

NOTES: Seek a gradual slope that has a firm bottom.  
Try not to land against current.

FIRST: As you approach land, engage the land gear in first speed while continuing the use of the water gear. Thus the rear wheels will start spinning slowly as you approach the shore while the twin screws continue to propel you forward.

SECOND: As soon as the car is free from the water and you are moving normally on land shift the water gear into neutral.

THIRD: Before proceeding on land at more than 20 miles an hour. Apply the foot brake lightly several times to make sure they are holding. This procedure will dry the brakes to bring them back to normal efficiency.



## Brakes

Your own safety as well as the safety of others depend on the condition of the brakes. Therefore, it is necessary and important that they are inspected regularly and adjusted by your Amphicar dealer.

## Important for new vehicles



The following conditions should not be exceeded during the breaking-in period:

### ON LAND

|                         | Max.<br>1st | Speed<br>2nd | m.p.h.<br>3rd | 4th |
|-------------------------|-------------|--------------|---------------|-----|
| During first 500 miles  | 9           | 14           | 24            | 40  |
| From 500 to 1.000 miles | 14          | 21           | 36            | 60  |

## Important

Remember that your AMPHICAR was designed for FRESH WATER ONLY. Should you use your AMPHICAR in salt water and corrosion occurs, you are not covered by the Warranty.

After 1.000 miles the speeds may gradually be increased.

### IN WATER

If the vehicle hasn't been driven for the first 1000 miles on land, drive at half speed (about half throttle), for the first ten hours.

## Maintenance Recommendations

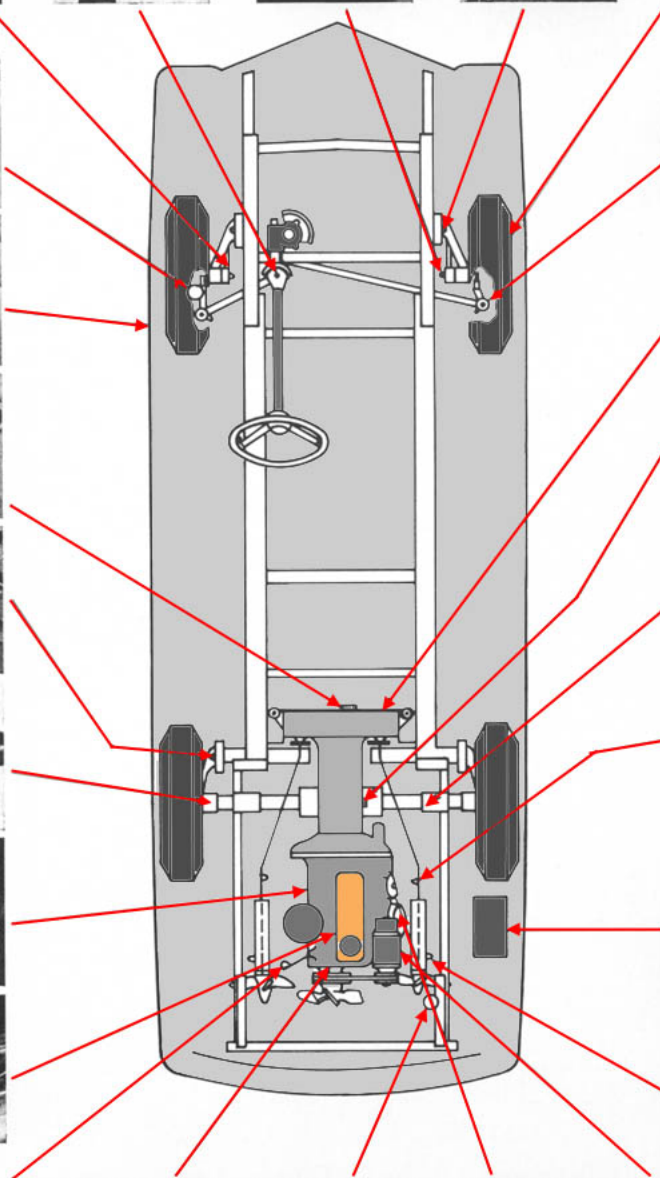
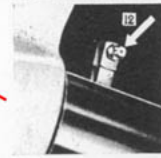
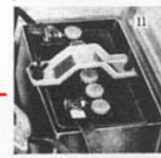
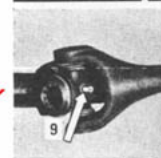
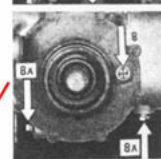
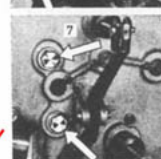
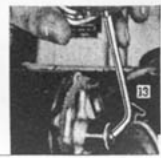
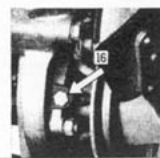
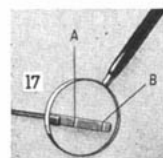
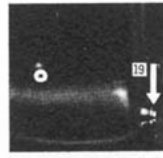
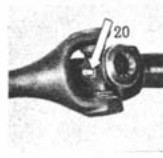
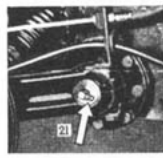
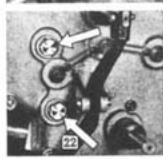
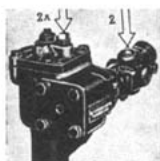
- 1 Road test
- 2 Wash oil filler cap and breather
- 3 Wash air filter and carburettor
- 4 Renew oil filter
- 5 Wash out the petrol pump
- 6 Clean petrol gauge of three way cock
- 7 Check fan belt tension and dynamo mounting bolts
- 8 Check cooling and heating system
- 9 Clean sparking plugs
- 10 Renew sparking plugs
- 11 Check and clean dynamo and starter-motor
- 12 Check and tighten cylinder head nuts
- 13 Check valve clearance (cold) adjust if necessary
- 14 Check ignition, clean and adjust contact points
- 15 Check engine = gearbox = radiator and exhaust mountings
- 16 Check brake and clutch pedal travel, also handbrake
- 17 Check the gear shift mechanism
- 18 Check play of steering, adjust if necessary
- 19 Check tightness of steering mounting bolts and linkage
- 20 Check play of stub axle bolts, re-tighten if necessary
- 21 Check steering knuckle arm play, re-tighten if necessary
- 22 Check brake hoses for condition and leaks
- 23 Check front and rear hub bearing adjustment
- 24 Check shock absorber mountings and coil springs
- 25 Check function of door hinges and locks
- 26 Check weather-strips and sealers for condition
- 27 Apply talc powder to door sealers
- 28 Check the vehicle for water tightness
- 29 Check function of all bowden cables
- 30 Check tightness of exhaust flange to manifold
- 31 Check all bolts, screws and nuts of body, re-tighten
- 32 Check wheel studs for tightness re-tighten if necessary
- 33 Check tire pressures
- 34 Interchange road wheels to balance wear
- 35 Check toe-in align if necessary
- 36 Wash Bilge pump end strainer
- 37 Check operation of all electrical components, adjust headlamps
- 38 Wipe clean door handles, gear shift, and steering wheel
- 39 Test run, final inspection, check idling of engine adjust if necessary

[illegible]

|    |  |   |   |   |   |   |   |   |   |
|----|--|---|---|---|---|---|---|---|---|
| 1  | Grease castor rods . . . . .                         | . | . | . | . | . | . | . | . |
| 2  | Grease steering universal joints . . . . .           | . | . | . | . | . | . | . | . |
| 2a | Check steering box oil level! . . . . .              | . | . | . | . | . | . | . | . |
| 3  | Grease stub axle . . . . .                           | . | . | . | . | . | . | . | . |
| 4  | Grease axles tubes . . . . .                         | . | . | . | . | . | . | . | . |
| 5  | Pack front and rear wheel hubs with grease . . . . . | . | . | . | . | . | . | . | . |
| 6  | Grease track rods . . . . .                          | . | . | . | . | . | . | . | . |
| 7  | Check water Transmission oil level . . . . .         | . | . | . | . | . | . | . | . |
| 8  | Check gearbox oil level . . . . .                    | . | . | . | . | . | . | . | . |
| 8a | Change gearbox oil . . . . .                         | . | . | . | . | . | . | . | . |
| 9  | Grease inside joints . . . . .                       | . | . | . | . | . | . | . | . |
| 10 | Grease universal joints . . . . .                    | . | . | . | . | . | . | . | . |
| 11 | Check battery electrolyte . . . . .                  | . | . | . | . | . | . | . | . |
| 12 | Grease propeller shafts . . . . .                    | . | . | . | . | . | . | . | . |
| 13 | Generator a few drops of oil . . . . .               | . | . | . | . | . | . | . | . |
| 14 | Smear distributor cam with oil . . . . .             | . | . | . | . | . | . | . | . |
| 15 | Check radiator water level . . . . .                 | . | . | . | . | . | . | . | . |
| 16 | Grease water pump (5 hand strokes) . . . . .         | . | . | . | . | . | . | . | . |
| 17 | Check engine oil level . . . . .                     | . | . | . | . | . | . | . | . |
| 18 | Oil filler cap . . . . .                             | . | . | . | . | . | . | . | . |
| 19 | Change engine oil . . . . .                          | . | . | . | . | . | . | . | . |
| 20 | Grease outside joint . . . . .                       | . | . | . | . | . | . | . | . |
| 21 | Grease axles tubes . . . . .                         | . | . | . | . | . | . | . | . |
| 22 | Change water transmission oil . . . . .              | . | . | . | . | . | . | . | . |
| 23 | Lubricate hinges and door locks . . . . .            | . | . | . | . | . | . | . | . |
| 24 | Check and top up brake fluid . . . . .               | . | . | . | . | . | . | . | . |

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## Important

After approximately 30 hours of water driving or if the vehicle has not been used for several days, after having completed a water drive, it is important to fill all grease nipples, irrespective of the above road mileage.

## Recommended Lubricants

### ENGINE OILS RECOMMENDED

| Atmospheric<br>Temperatures Expected     | S.a.e. Number    |            |
|--|------------------|------------|
|  | Single Viscosity | Multigrade |
| 10° F. to 110° F. . . . .                | 20W              | 10W-30     |
| 10° F. below zero to 93° F. above zero . | 10W              | or 10W-30  |
| 10° F. below zero and colder . . . .     | 5W               | 5W-20      |

NOTE: Only petroleum base oil marketed by reputable refineries which are identified as "For Service MS or DG" are recommended for the Amphicar engine.

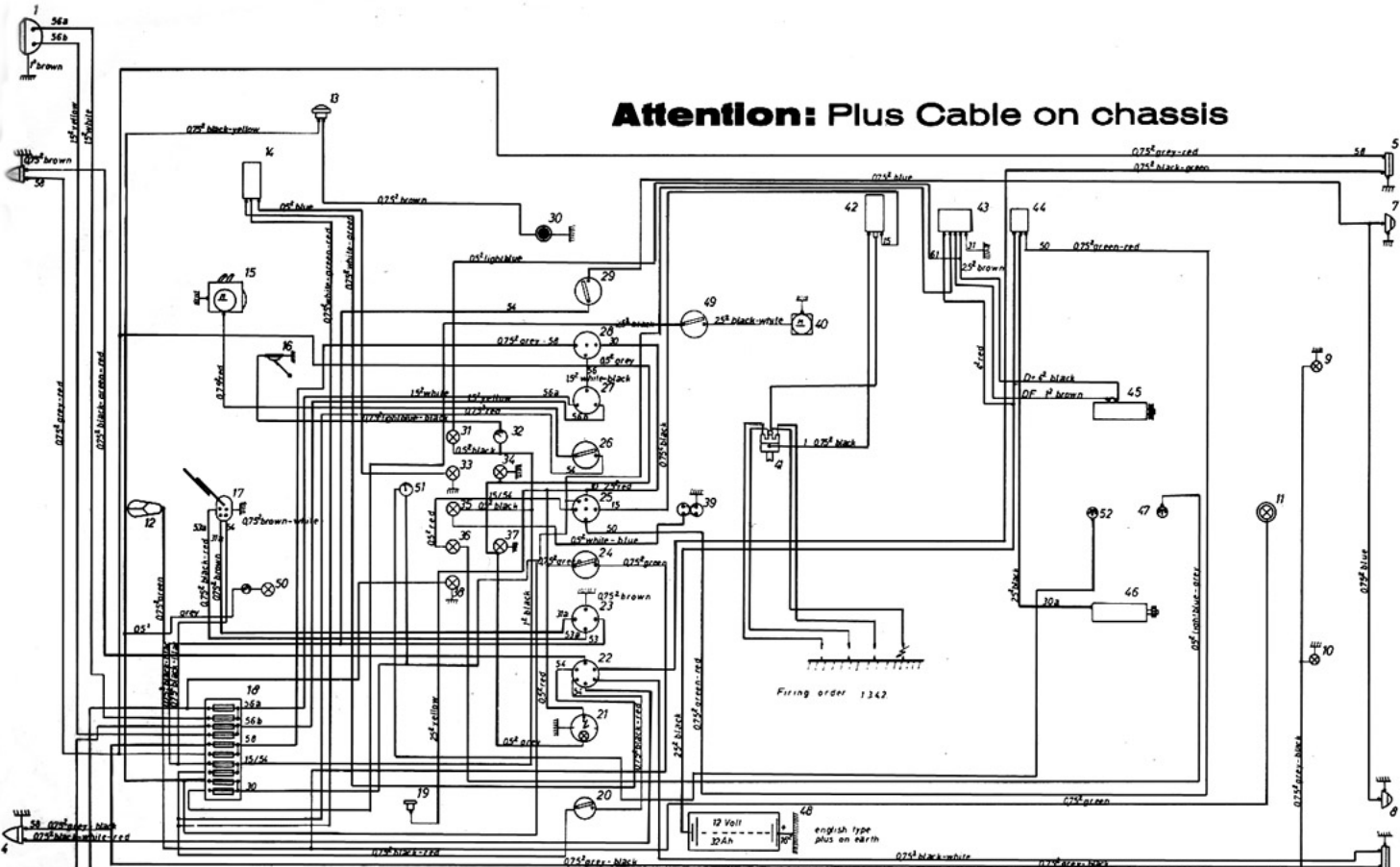
## **SUPPLEMENTAL AMPHICAR LUBRICATION INSTRUCTIONS**

In the Owner's Manual, Pages 16 and 17, you will find a listing and illustration of all points to be lubricated and greased. The most important points to be greased are those which are submerged when using our vehicle in water. Special attention has to be given to points 9 and 20, the drive shaft universals. For greasing the inner universal joints, the rear seats and the seat base have to be removed. This has to be done anyway when checking the oil level in the standard as well as the water transmission. When the seat has been removed, unscrew the clamp which tightens the rubber bellows to the transmission and push the rubber bellows towards the drive shaft tunnel. This will give you access to the inner joints and the pertaining grease nipples. When refitting the rubber bellows, it is of utmost importance that the rim of the transmission as well as the connecting portions of the rubber bellows are free from grease and dirt to ensure a perfectly tight fit. The outer joints can easily be reached from the outside. For greasing items 1 and 6, a hand grease gun should be used in order not to damage the rubber protection caps. If power grease system would be used, too much pressure would be applied on these bellows and they will tend to bust.

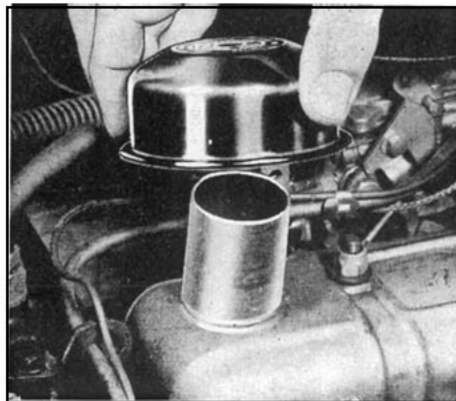
Regarding the grease to be used for our vehicle and which proved to be the most water resistant, we strongly recommend that Molykote C 3" be used. If this grease is not available locally, it can be ordered from the "Alpha Molykote Corp. I", 6.5 Harvard Avenue, Stamford, Connecticut.

We further advise to have the drain plug removed whenever the vehicle is taken out of the water to keep the bilge as dry as possible. You will understand! that any water accumulating in the bilge will create dampness and the electrical system will tend to corrode under these circumstances.

# Attention: Plus Cable on chassis



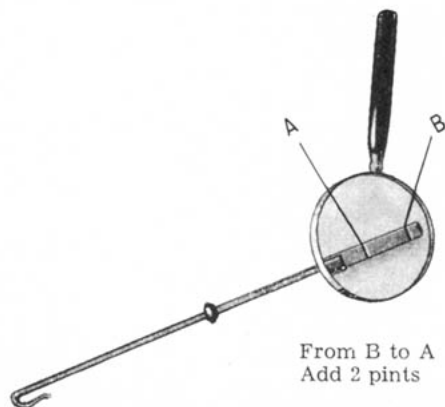
- |  |                              |                                  |                                      |                             |                                |
|--|------------------------------|----------------------------------|--------------------------------------|-----------------------------|--------------------------------|
| 1 Headlamp (right)                               | 10 License plate lamp (left) | 19 Cigarette lighter             | 28 Light switch                      | 37 Speedometer light        | 46 Starter motor               |
| 2 Headlamp (left)                                | 11 Top light                 | 20 Stop-light switch             | 29 Reversing light switch            | 38 Main beam control light  | 47 Oil pressure control switch |
| 3 Direction indicator (front right)              | 12 Red-green position light  | 21 Electric clock                | 30 Horn button                       | 39 Propeller control switch | 48 Battery                     |
| 4 Direction indicator (front left)               | 13 Horn                      | 22 Direction indicator switch    | 31 Charging-control light            | 40 Bilge pump               | 39 Bilge pump switch           |
| 5 Combined tail stop light and indicator (right) | 14 Flasher unit              | 23 Windshield wiper motor switch | 32 Fuel gauge                        | 41 Distributor              | 50 Interior light              |
| 6 Combined tail stop light and indicator (left)  | 15 Heater                    | 24 Water drive control switch    | 33 Direction indicator control light | 42 Coil                     | 51 Thermometer                 |
| 7 Reversing light                                | 16 Tank unit for fuel gauge  | 25 Ignition switch               | 34 Combined instrument light         | 43 Control box              | 52 Thermometer gauge           |
| 8 Reversing light                                | 17 Windshield wiper motor    | 26 Heater switch                 | 35 Water drive control light         | 44 Starter solenoid switch  |                                |
| 9 License plate lamp (right)                     | 18 Fuse box                  | 27 Dipper switch                 | 36 Oil pressure control light        | 45 Dynamo                   |                                |



## Maintenance

**Engine Oil Level** - Check Every 250 miles or weekly, whichever occurs first.

**Oil Change Recommendations** - After the first 500 miles of driving, the original heavy duty breakin oil should be drained from the engine and the crankcase refilled with oil as recommended. Every 3,000 miles thereafter under favourable operating conditions, drain and refill the engine in the same manner.



### Engine oil level indicator

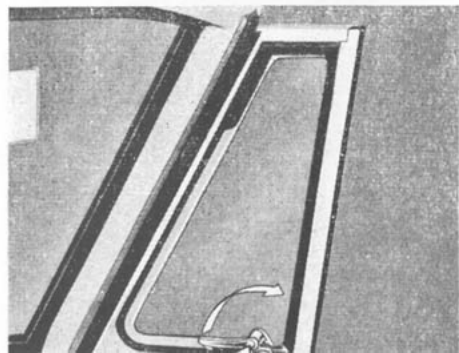
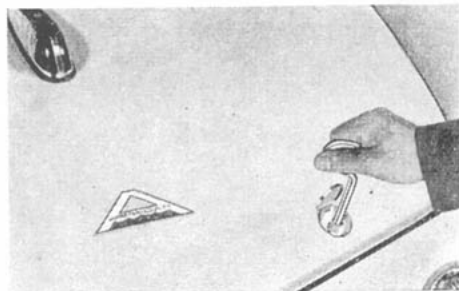
Check engine oil level at each gas stop. Be sure the level of your oil is somewhat above the ADD OIL mark, and be careful not to overfill above the FULL mark.

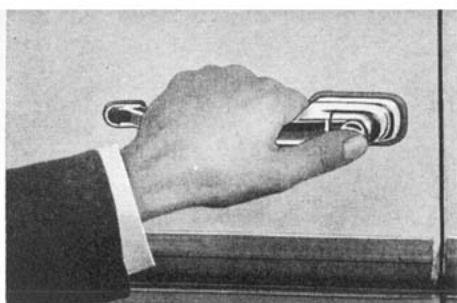
## Body

To open the engine hood, a "T" square type key is supplied with the car which is inserted into the hood lock. Turn counter-clockwise to open, clockwise to close. Lift the engine hood and remove the support stay from its resting position and insert same into the hole provided in the rear. To close the engine hood, reverse procedure.

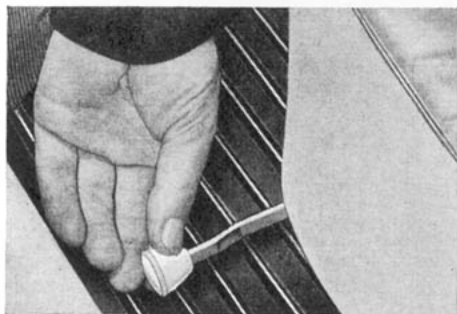
**Opening the Luggage Compartment** - Use the same "T" square type key and insert it in the trunk lid lock. Turn it counter-clockwise, lift the lid and remove the support stay from its resting position and insert the stay end to a raised holding position.

**Door-Windows** - There are small ventilator windows which control the flow of air in and out of the vehicle for the comfort of passengers in the front and rear.



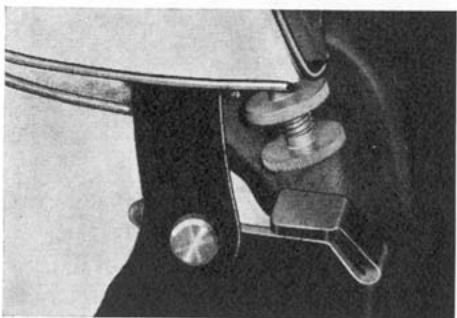


**Doors** - The doors are fitted with push button door handles. By pressing the button the doors can be easily opened.



### **Seat adjustment**

Press down the small lever located at the left side of the drivers seat and with slight forward or rearward pressure move the seat to the desired position. Release lever to lock the seat in the most comfortable position.



**Back-Rests** - The independent back rests can be adjusted by shortening or lengthening the screw located underneath the back rests. When the most comfortable position has been found, secure, by tightening the lock nut.

## Changing wheels

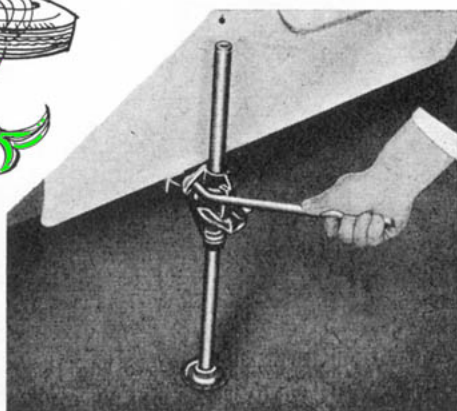
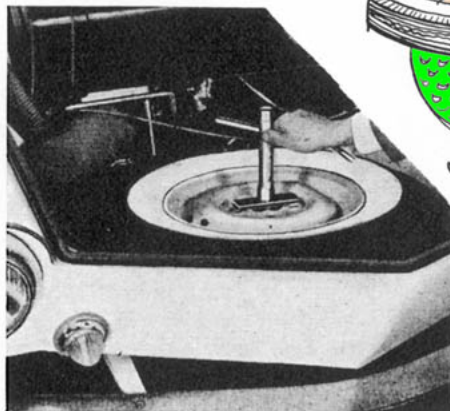
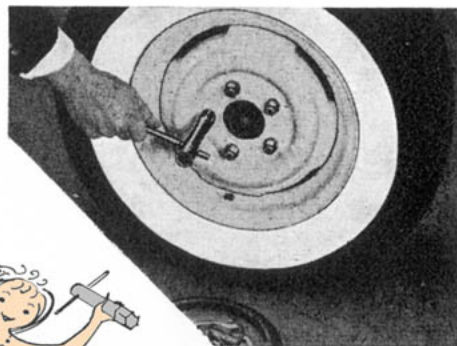
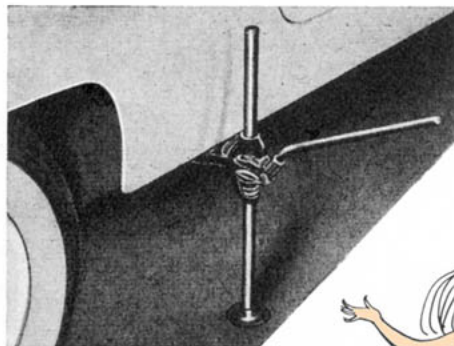
1. Set parking brake and block front wheels. Place jack in position.

2. Loosen wheel nuts, counter-clockwise.

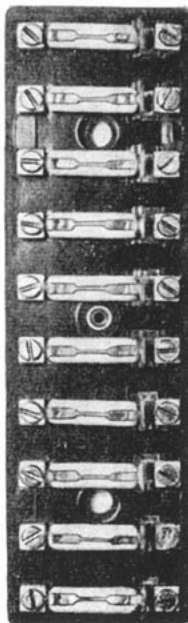
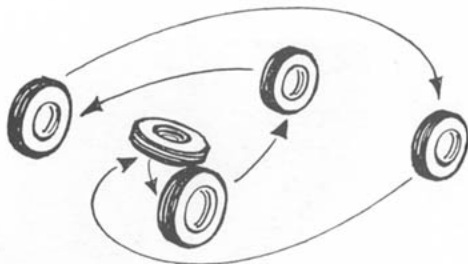
3. Raise the wheel off the ground.

4. Remove wheel. Install spare wheel and tighten nuts finger tight.

5. Lower the jack and fully tighten wheels nuts.







## Wheels and tires

Balancing-Wheels and tires should be balanced (interchanged) after every 6,000 miles as shown in diagram. If the wheels are out of balance, it will cause unnecessary wear and tear on tires and make driving dangerous.

**Tire-Pressure** - It is very important that a check on tire pressure is made weekly and any losses corrected: but only adjust the tire while cold. NOTE: Never deflate a warm tire to the recommended pressure. Correct inflation will give greater gas economy.

**Front 20 lbs/sq. in. Rear 31 lbs/sq. in.**

## Fuse box

The fuse box is located in the luggage compartment with an affixed table showing the position of the fuses.

Fuses will only blow if there is a faulty electrical system. Therefore, it is not enough to replace the blown fuse unless the cause has been located and repaired.

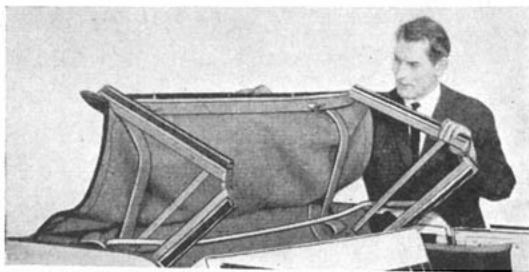
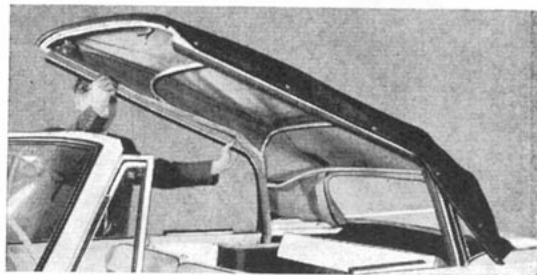
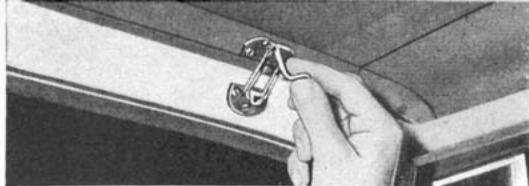
It is recommended that a spare box of fuses and bulbs be carried in the car in case of emergency. Never substitute blown fuses by using wire or tin foil as this will only increase the trouble.

If the fuse blows repeatedly, the complete electrical system must be checked immediately, preferably by your Amphicar dealer.

## Table of bulbs

|                                  | Quantity | Type         |
|----------------------------------|----------|--------------|
| Headlamp Sealed Beam             | 2        |              |
| Parking Light                    | 2        | 4 BA 9a      |
| Indicator Light (Front)          | 2        | 21 cp BA 15s |
| Indicator and Stop Tail Light    | 2        | 32/4 cp      |
| Interior Light                   | 1        | 5            |
| Number Plate Light               | 2        | 4 BA 9s      |
| Top Control Light                | 1        | 21 cp BA 15s |
| Reverse Light                    | 2        | 21 cp BA 15s |
| Control Light (Yellow)           | 1        | 2 BA 9s      |
| Speedometer Light                | 1        | 2 BA 1s      |
| Starboard Light                  | 1        | 21 cp BA 15s |
| Panel Lighting                   | 1        | 2w BA 1s     |
| Blinker Control Light            | 1        | 2w BA 1s     |
| Headlamp Main Beam Control Light | 1        | 2w BA 1s     |
| Oil Pressure Warning Light       | 1        | 2w BA 1s     |
| Ignition Warning Light           | 1        | 2w BA 1s     |
| Electric Clock Light             | 1        | 2w BA 1s     |





## Instructions for opening and closing cabriolet top

Unfasten the stud fasteners above the windshield and along both sides of car. Also open both zip fasteners at the rear - then lower the top.

Reverse procedure to raise top.

NOTE: - When raising the top, it is recommended that the windows be lowered.

## Care of your cabriolet top

Your top is made of water-proof material and to remove oil spots use a mild soap solution or gasoline and thorough rinsing with cold water. DO NOT use thinners for cleaning, since such use removes the water resistance of the material.

## Cooling system

The cooling system is sealed, pressurized and thermostatically controlled. Water circulation is assisted by an impellor type pump to which is attached a six-bladed fan assembly driven by a "V" belt.

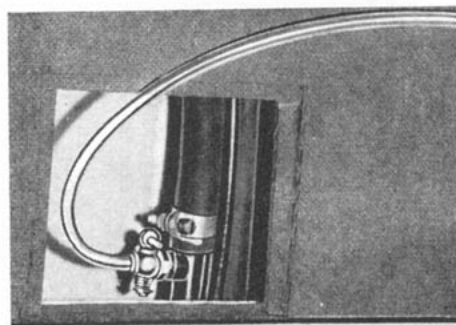
## Draining

1. **Caution** - If the engine is hot, exercise extreme care when removing the filler cap. Turn it a half-turn and allow pressure to be fully released before completely removing the cap.
2. Remove rubber mat and cover at the right hand rear passenger side remove draining hose and place end outside the door. Open drain tap.
3. Open the heater air vent.

**Filling** - Close drain tap and then fill the system with water. After filling, start the engine to circulate the water through the heater unit. When the water is warm, stop the engine and fill the radiator to the correct level.

**Anti-Freeze** - To assure best effective heater performance, your Amphicar has been equipped with a thermostat. Therefore, the use of ethylene glycol type anti-freeze is recommended.

Use Amphicar brand anti-freeze.



Use  
**Amphicar**  
products  
for  
best results

## Beauty care

**Washing** - Preserve the original beauty of your Amphicar's finish and protect the value of your investment by keeping it as clean as possible. Gasoline, tree sap, road tar, excretion from insects and smoke from factory chimneys, contain harmful chemicals and other foreign matter that may permanently damage the finish of your car if not washed off promptly. Frequent washing is very important in areas where salt or calcium chloride may come into contact with your car's finish.

**Polishing** - We recommend that your car be waxed at the time of delivery and every four to six months thereafter. Properly applied polishes and waxes of known quality will help maintain the appearance of your car.

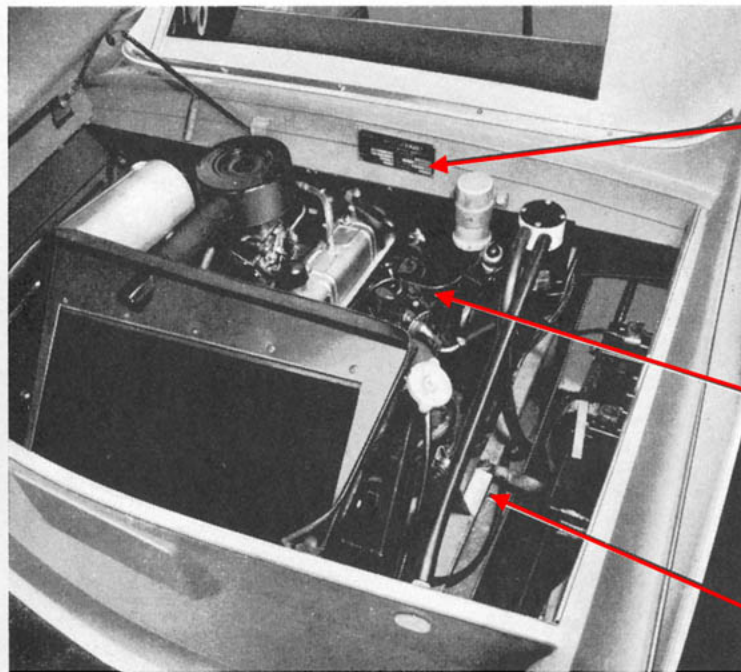
**NOTE:** Do not use a polish containing a large amount of abrasive. It may do the job quickly but will remove the paint and scratch lustrous metal parts.

**Chromium and Bright Parts** - These require cleaning to preserve their brightness and avoid corrosion. Any chrome cleaner and polish may be used for this purpose.

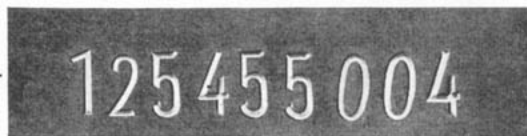
## Beauty care inside your car

**Seating and Trims** - Suds only should be applied to seats and trim with a damp cloth, sponge, or soft brush and rubbed gently. The suds should then be removed with a clean, damp cloth or sponge. Finally, the surface should be wiped **dry** with a soft cloth. Use Amphicar products for best results.

## Position of model identification plates



|  |            |   |       |
|--|------------|---|-------|
| <br> |            | MANUFACTURED IN<br><b>WEST GERMANY</b> BY<br><b>INDUSTRIE-WERKE KARLSRUHE</b><br>Aktiengesellschaft |       |
| Engine-No  | GK 2952 HE | Year of production  | 1965  |
| Chassis-No   | 125455004  | Model   | 770   |
| Perm. max weight lbs   | 2 948      | Curb weight lbs   | 2 268 |
| Perm. axle load front lbs  | 1 144      | Perm. axle load rear lbs  | 1 837 |



When ordering spare parts or keys chassis and engine numbers as well as type designation have to be stated.

**Technical Data.****Engine:**

|   |                            |
|---|----------------------------|
| Type  | O.H.V. push rod operated   |
| Number of cylinders                               | 4                          |
| Bore  | 69.3 mm (2.728")           |
| Stroke  | 76 mm (2.992")             |
| Capacity (swept volume)                           | 1147 c.c. (70 cu.ins)      |
| Piston area                                       | 151 sq.cms. (23.4 sq.ins.) |
| Compression ratio                                 | 8:1                        |
| Valve working clearances                          | 0.010" (0.254 mm)          |
| (cold.) Exhaust & Inlet Clearance of valve timing | 0.040" (1.016 mm)          |
| No. 4 Exhaust & Inlet Valve seat angle            | 45°                        |

**Performance.****Nett:**

|               |                               |
|---------------|-------------------------------|
| Max. H.P.     | 43 at 4,500 r.p.m.            |
| Max. Torque   | 730 lb. in at 2,250 r.p.m.    |
| Max. B.M.E.P. | 131 lb.sq.in. (9.21 kg.sq.cm) |

**Gross:**

|               |                               |
|---------------|-------------------------------|
| Max. H.P.     | 43 at 4,500 r.p.m.            |
| Max. Torque   | 775 lb. in. at 2,250 r.p.m.   |
| Max. B.M.E.P. | 139 lb.sq.in. (9.77 kg.sq.cm) |

**Lubrication (Engine)**

|                          |  |
|--------------------------|--|
| Oil sump capacity        | 7 pints (4 litres)   |
| Type of system           | Pressure   |
| Type of pump             | Hobourne-Eaton double eccentric rotor                            |
| Pressure at 2,000 r.p.m. | 65—70 lb/sq.in. (4.57—4.92 kg/sq.cm)                             |
| Filter type              | Purolator or A.C.Delco full flow external replacable filter unit |

**Ignition Timing.**

|                       |              |
|-----------------------|--------------|
| 8:1 compression ratio | 15° B.T.D.C. |
|-----------------------|--------------|

**Firing Order.**

|  |             |
|--|-------------|
|  | 1. 3. 4. 2. |
|--|-------------|

**Sparking Plugs.**

|                                   |                       |
|-----------------------------------|-----------------------|
| Lodge C.N.Y. 1/2" (12.7 mm reach) | 0.025" (0.65 mm) gap. |
|-----------------------------------|-----------------------|

**Fuel system (Carburettor)**

|      |  |
|------|--|
| Make | Solex downdraught                                  |
| Type | B. 30 Zic. 3<br>B. 30 Zic. 5, or<br>B. 30 P.S.E. 1 |

**Settings B. 30 Zic. 3**

|                    |          |
|--------------------|----------|
| Choke              | 21       |
| Main jet           | 115      |
| Air correction jet | 160      |
| Pilot jet          | 45       |
| Pilot air bleed    | 100      |
| Starter jet        | G.S. 125 |

**Settings B. 30 Zic. 5**

|                    |        |
|--------------------|--------|
| Choke              | 21     |
| Main jet           | 112/5  |
| Air correction jet | 112.5  |
| Pilot jet          | 160    |
| Pilot air bleed    | 35     |
| Emulsion tube      | 100    |
| No side well       | No. 65 |

**Settings B. 30 P.S.E. 1**

|                     |   |
|---------------------|---|
| Choke               | 21.5  |
| Main jet            | 112.5   |
| Air correction jet  | 175   |
| Pilot jet           | 45  |
| Pilot air bleed     | 85  |
| Econstat air bleed  | 1.2   |
| Econstat petrol jet | 100   |
| Accelerator pump    | Set on short stroke position i.e., outer slot |

|                                    |  |
|------------------------------------|--|
| <b>Air cleaner and Silencer</b>    | A. C.-paper element type   |
| <b>Fuel Pump.</b>                  |  |
| Make                               | A. C. mechanical   |
| <b>Electrical system</b>           |  |
| Type                               | 12 volt  |
| <b>Brake system</b>                |  |
| Type                               | Hydraulic  |
| Action of foot brake               | On all 4 wheels/<br>expanding type   |
| Action of hand brake               | Mechanical /on rear wheels   |
| <b>Suspension (Front and Rear)</b> |  |
| Type                               | Independent type system. Coil springs controlled by telescopic type direct acting dampers. |
| <b>Axle.</b>                       |  |
| Type                               | Oscillating  |
| Drive                              | Propeller shafts/<br>Universal joints  |
| <b>Gearbox.</b>                    |  |
| Type                               | 4 forwards 1 reverse<br>Synchromesh  |
| Make                               | Hermes   |
| Ratio                              | Top 3rd 2nd 1st Reverse<br>1.05 1.75 2.91 4.5 4.13   |
| Differential                       | 4.72   |
| <b>Water transmission box.</b>     |  |
| Type                               | 1 forward 1 reverse  |
| Ratio                              | 1.3  |

#### Wheels and Tires

|                |                          |
|----------------|--------------------------|
| Tire size      | 6.40 x 13                |
| Tire pressures |                          |
| Front          | 20 lbs/sq. in. (1.0 atü) |
| Rear           | 31 lbs/sq. in. (2.1 atü) |

#### Chassis Data.

|                      |                                   |
|----------------------|-----------------------------------|
| Wheelbase            | 82.677" (2100 mm)                 |
| Track front          | 47.312" (1202 mm)                 |
| Track rear           | 49.202" (1250 mm)                 |
| Toe-in               | 0.078" ( 2 mm)                    |
| Camber               | Front 1° Rear 0°                  |
| King pin inclination | 4°                                |
| Castor               | 6°                                |
| Turning circle       | 39.448 ft (12.2 m $\varnothing$ ) |
| Steering             | Worm gearing Z. F.                |
| Steering Wheel Dia.  | 15.748" (400 mm)                  |

#### Dimensions and weights

|                          |                           |
|--------------------------|---------------------------|
| Overhall length          | 157.480" (4275 mm)        |
| Overhall width           | 61.337" (1558 mm)         |
| Overhall height (loaded) | 55.118" (1480 mm)         |
| Ground clearance         | 4.291" ( 209 mm)          |
| Belly clearance          | 9.567" ( 243 mm)          |
| Weight empty             | 2292.80 lbs (1040 kg)     |
| Curb weight              | 2954.18 lbs (1340 kg)     |
| Front axle load          | 1128.765 lbs (512 kg)     |
| Rear axle load           | 1826.208 lbs (828 kg)     |
| Fuel tank capacity       | 12.408 Galls. (47 litres) |



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